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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,432	01/18/2000	Muneki Ando	35.C14218	9693

5514 7590 03/21/2005

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT PAPER NUMBER

2674

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/484,432	ANDO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Abbas I Abdulsalam	2674	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 71-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 71-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/25/05 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 71-75 are rejected under 35 U.S.C. 103(a) as being obvious over Sakuragi et al. (USPN 6195076).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter

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disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claim 71, Sakuragi teaches a display apparatus comprising a plurality of column wirings each connected to a respective display device; at least one row wiring, connected to said display devices (col. 9, lines 39-48 and Fig. 1); and a respective pulse width modulator provided for each column wiring for outputting, for each column wiring, a modulation signal (col. 13, lines 60-67 and Fig. 7 (8)).

Sakuragi does not specifically teach, “the modulation signal being corrected such that an effect on luminance in relation to the modulation signal, of deforming the waveform of the modulation signal as a result of a level change of the modulation signal supplied to the adjacent column wiring is inhibited”.

However, Sakuragi as shown in Fig. 22 teaches that although a cold cathode type electron-emitting device has a characteristic of fast response, since the current waveform has a

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long rise time, the resulting waveform of the emission current  $I_{sub.e}$  is deformed (col. 5, lines 63-67), and as a solution to the problem, Sakuragi teaches a display apparatus which has no luminance unevenness, realizes superior linearity of a grayscale and has a characteristic of quick response (col. 6, lines 66-67, col. 7, lines 1-2 and Fig. 18). Sakuragi also teaches that a light emission luminance in a display apparatus could be controlled by the pulse-width modulating method (col. 6, lines 45-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Sakuragi's technique of avoiding luminance unevenness inside a circuit diagram of Fig. 7 for the purpose of attaining practical light emission luminance in a display apparatus.

Regarding claim 72, Sakuragi teaches each of said display devices comprises an electron-emitting device (col. 1, lines 40-57).

Regarding claim 73, Sakuragi teaches said pulse width modulators each supply a constant current for driving a respective one of said display devices (col. 5, lines 45-50).

Regarding claim 74, Sakuragi teaches said modulation signal being supplied to the adjacent wiring is tuned off prior to turning off the modulation signal from the predetermined pulse width modulator, the modulation signal is corrected to have a longer pulse width (col. 13, lines 8-18, Fig. 5B and Fig. 5F).

Regarding claim 75, Sakuragi teaches when the modulation signal supplied to the adjacent wiring is tuned on following to turning on of the modulation signal from the predetermine pulse width modulator, the modulator signal is corrected to have a shorter pulse width (col. 13, lines 8-18, Fig. 5B and Fig. 5F).

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*Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art is cited for further reference.

U.S. Pat. No. 6,445,367 to Suzuki et al.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I Abdulsalam whose telephone number is (571)272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard, can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas I Abdulsalam

Examiner

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March 9, 2005

  
**XIAO WU**  
**PRIMARY EXAMINER**